

REMARKS

Claims 1-8, 10-25, 27-33 are pending in the present Application. Claims 1-3, 5-10, and 12-33 are rejected. Claims 4 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants note that claims 9 and 26 have been previously canceled.

In response to the Office Action, Applicants are amending independent claims 1, 8, 15, 17, and 23-25, and dependent claims 2, 3, 7, 10, 12, 14, 32, and 33. Additionally, Applicants are canceling dependent claims 4 and 11. No new matter has been added by way of the amendments. In view of the foregoing amendments and the following remarks, Applicants hereby respectfully request reconsideration and allowance of the application.

Allowable Subject Matter

In paragraph 1 of the Office Action, claims 4 and 11 are objected to as being dependent upon a rejected based claim, but would be allowable if rewritten in independent form including all of the limitations of the based claim and any intervening claims. In paragraph 2 of the Office Action, the Examiner states, "the prior art of record fails to explicitly teach wherein the piecewise analytical function is a piecewise non-linear function." In response, Applicants are amending claims 1 and 8 to incorporate "a piecewise function, each piece of the piecewise function comprising an analytical function . . . wherein at least one analytical function of the piecewise function is a non-linear function." Because the allowable subject matter of claims 4 and 11 have been incorporated into their respective base claims, the base claims are now allowable.

Specification

In paragraph 3 of the Office Action, the specification is objected to as failing to provide proper antecedent basis for the claimed subject matter: "... wherein each piece of the piecewise analytical function is an analytical function of a predefined class defined by corresponding parameters." In response, Applicants are amending claim 2 to delete the usage of a "predefined class." As amended, claim 2 recites, "each piece of the piecewise function is an analytical function defined by corresponding parameters." Support for amended claim 2 is found, among other places, in paragraphs 26, 28, and 43 of the specification.

Rejection Under 35 U.S.C. §102(e)

In paragraph 5 of the Office Action, claims 1-3, 8, 10, 17, 24-25, and 28-33 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No., 6,285,348 B1 to Lewis (hereinafter, "Lewis").

In addition to incorporating allowable subject matter into claims 1 and 8, Applicants are amending claims 17, 24, and 25 to incorporate "a piecewise function, each piece of the piecewise function comprising an analytical function . . . wherein at least one analytical function of the piecewise function is a non-linear function." In contrast to independent claims 1, 8, 17, 24, and 25, Lewis does not teach a "piecewise function" such that "at least one analytical function of the piecewise function is a non-linear function." Therefore, Applicants assert that independent claims 1, 8, 17, 24, and 25 are allowable. Claims 2, 3, and 28-31 each depend either directly or indirectly from claim 1 and are therefore allowable for the same reasons as claim 1. Claims 10, 32, and 33 each depend directly from claim 8 and are therefore allowable for the same reasons as claim 8.

Rejection Under 35 U.S.C. §103(a)

In paragraph 18 of the Office Action, claims 5, 6, 12, 13 (sic), 15, 16 (sic), 18, and 20-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lewis in view of U.S. Patent No. 5,509,110 to Latham (hereinafter, "Latham"). Applicants traverse with regards to the presently amended claims.

Claims 5 and 6 depend directly and indirectly, respectively, from claim 1 and include all the limitations of claim 1. Claim 12 and 13 depend directly and indirectly, respectively, from claim 8 and include all the limitations of claim 8. Claims 18 and 20-22 depend directly from claim 17 and include all the limitations of claim 17. In view of the amendments to claims 1, 8 and 17, the dependent claims 5, 6, 12, 13, 18, and 20-22 now incorporate the limitation of "a piecewise function, each piece of the piecewise function comprising an analytical function . . . wherein at least one analytical function of the piecewise function is a non-linear function." In contrast, Lewis and Latham, either individually or in combination, do not teach or suggest such a structure or combination of structure. Because Lewis and Latham do not teach or suggest each and every claim limitation of claims 5, 6, 12, 13, 18, and 20-22, Applicants assert that claims 5, 6, 12, 13, 18, and 20-22 are allowable.

Claim 15 as amended requires "a piecewise function, each piece of the piecewise function being an analytical function . . . wherein at least one analytical function of the piecewise function is a non-linear function." In contrast to amended claim 15, Lewis and Latham, either individually or in combination, do not teach or suggest such a structure or combination of structure. Because Lewis and Latham do not teach or suggest each and every claim limitation of claim 15, Applicants assert that claims 15 is allowable. Claim 16 depends directly from claim 15 and is allowable for the same reasons stated above for claim 15.

In paragraph 29 of the Office Action, claims 7, 14, and 23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lewis. Claim 7 depends from claim 1, while

claim 14 depends directly from claim 8. As such, claims 7 and 14 are allowable for the same reasons as claims 1 and 8, respectively.

Claim 23 as amended requires "a piecewise function, each piece of the piecewise function being an analytical function . . . wherein at least one analytical function of the piecewise function is a non-linear function." In contrast to claim 23, Lewis does not teach or suggest such a structure or combination of structure. Therefore, Applicants assert that claim 23 is allowable.

Lack of Prima Facie Case

In the Office Action, the Examiner has failed to make a prima facie case of anticipation or obviousness with respect to claims 19 and 27. Furthermore, claim 19 depends indirectly from claim 17, and claim 27 depends directly from claim 1. Applicants assert that claims 19 and 27 are allowable for at least the fact that claims 19 and 27 depend from allowable independent claims.

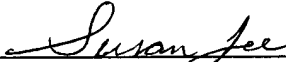
CONCLUSION

In view of the above remarks, Applicants believe that the rejections in the Office Action are fully overcome, and the Application is in condition for allowance. The Examiner is invited to contact Applicants' representative at the number below if the Examiner has any questions or if there are remaining outstanding issues.

Respectfully submitted,

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